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What is claimed is:

1. A three-dimensional, engineered, bioprinted, biological intestinal tissue model comprising:

(i) a layer of intestinal interstitial tissue comprising myofibroblasts; and

(ii) a layer of intestinal epithelial cells on the layer of intestinal interstitial tissue, to form the three-dimensional, engineered, biological intestinal tissue model.

2. The intestinal tissue model of claim **1**, wherein at least one of the layer of intestinal interstitial tissue comprises myofibroblasts and layer of intestinal epithelial cells further comprises at least one type of immune cells.

3. The intestinal tissue model of claim **2**, wherein the immune cells are myeloid cells.

4. The intestinal tissue model of claim **3**, wherein the myeloid cells are monocytes, macrophages, neutrophils, basophils, eosinophils, dendritic cells or megakaryocytes.

5. The intestinal tissue model of any one of claims **2-4**, wherein the immune cells are present in at least one of (a) the interstitial layer, (b) the epithelial cell layer, (c) between the interstitial layer and the epithelial cell layer, (d) on top of the epithelial cell layer, and (e) below the interstitial cell layer.

6. The intestinal tissue model of claim **1** or **2**, wherein the layer of intestinal epithelial cells comprises primary epithelial cells from a healthy donor.

7. The intestinal tissue model of claim **1** or **2**, wherein the layer of intestinal epithelial cells comprises primary epithelial cells from a diseased donor.

8. The intestinal tissue model of claim **7**, wherein the diseased donor has celiac disease, Crohn's disease, ulcerative colitis, irritable bowel syndrome, hemorrhoids, diverticulitis, inflammatory bowel disease, microscopic colitis, lymophocytic colitis, collagenous colitis, endocrine disorders, metabolic disorders, obesity, diabetes, dyslipidemia, intestinal or colorectal cancer.

9. The intestinal tissue model of any one of claims **1-8**, wherein the layer of intestinal epithelial cells further comprises at least one stem cell population.

10. The intestinal tissue model of claim **9**, wherein the at least one stem cell population is capable of differentiating.

11. The method of any one of claims **1-10**, wherein the intestinal tissue model further comprises tumor(s), tumor fragment(s), tumor cells or immortalized cells.